Claims 15, 16, 18, 19, and 21-24 are rejected under 35 U.S.C. § 103(a) as being

unpatentable over U.S. Patent No. 5,675,364 issued to Stedman et al. (*Stedman*) in view

of U.S. Patent No. 5,455,561 issued to Brown (*Brown*) and further in view of U.S. Patent

No. 5,731,832 issued to Ng (*Ng*). For at least the reasons set forth below, Applicants

submit that claims 15, 16, 18, 19 and 21-24 are not rendered obvious by *Stedman*, *Brown*

and *Ng*.

Claim 15 recites a computer system that includes:

a memory to store a weighted average of brightness corresponding to one
or more frames representing a view at different times; and
a processor coupled to the memory to cause the computer system to
transition from an active mode to an inactive mode in response to a predetermined
period of inactivity and to compare the property of two frames to each other while
the computer system is in the inactive mode and cause the computer system to exit
the inactive mode in response to the weighted average of brightness of the two
frames differing by a predetermined amount.

Claim 22 recites a method that includes:

causing the computer system to transition from an active mode to an
inactive mode in response to a predetermined period of inactivity;
receiving a first frame corresponding to a view at a first time while in the
inactive mode;
determining a weighted average brightness for the first frame;
receiving a second frame corresponding to a view at a second time while
in the inactive mode;
determining a weighted average brightness for the second frame; and
causing the computer system to exit the inactive mode if the weighted
average brightness for the first frame differs from the weighted average brightness
for the second frame by a predetermined amount.

Thus, Applicants claim comparing two frames while a computer system is in an inactive

mode and causing the computer system to exit the inactive mode in response to the

weighted average brightness difference of the two frames.

Whether taken individually or in combination, *Stedman*, *Ng*, and *Brown* do not disclose, teach, or suggest comparing two frames while a computer system is in an inactive mode and causing the computer system to exit the inactive mode in response to the weighted average of brightness of the two frames differing by a predetermined amount, as recited in the claims.

Stedman teaches waking up a computer system when an I/O controller receives an indication of action from either a keyboard or a mouse. See col. 4, lines 37-43, which recites the following:

> "After entering the system power saving mode of operation, computer 10 system remains in the system power saving mode of operation until a wakeup signal is generated by I/O controller 40. More specifically, **when I/O controller 40 receives an indication of action from either keyboard or mouse** 78, I/O controller then generates the wakeup signal which signals system processor 12 to wake up ..."

Stedman does not teach or suggest comparing video frames while a computer system is in an inactive mode. *Stedman* does not teach or suggest causing a computer system to exit an inactive mode in response to the weighted average of brightness of two frames differing by a predetermined amount.

Ng discloses comparing two video frames to determine motion. The system disclosed by *Ng* compares video frames on a pixel-by-pixel basis. See col. 7, line 11-28. *Ng* does not provide any motivation for combination with a computer system. *Ng* does not disclose, teach, or suggest comparing video frames while a computer system is in an inactive mode. *Ng* does not disclose, teach, or suggest causing a computer system to exit an inactive mode in response to the weighted average of brightness of the two frames differing by a predetermined amount.

Brown discloses a security surveillance system for monitoring a scene. See col. 4, lines 5-6. The surveillance system uses the size of the change between frames and the duration of the change to discriminate between nuisance changes and those changes that represent a breach of safety. See col. 4, lines 10-13. However, *Brown* does not disclose causing a computer system to exit an inactive mode when a change is detected. When *Brown* detects a change between frames, a threshold detector output 18 is set, and a discrepancy counter 16 is enabled in order to detect the duration of change. See col. 4, line 53 to col. 5, line 5. Therefore, *Brown*'s surveillance system enters another stage of processing after detecting a difference between frames. This teaches away from the present invention as claimed.

There is no suggestion or motivation to combine the video camera security surveillance systems of *Ng* and *Brown* with a computer wakeup feature. There is no suggestion or motivation in the references to modify the video camera security surveillance systems of *Ng* and *Brown* into an apparatus for monitoring a computer system while the computer system is in an inactive state and causing the computer system to exit the inactive state in response to motion detected by a camera or any other device.

The Office Action states that it would have been obvious to combine the teachings of *Brown* into the system of *Stedman* to provide a system which can recognize different modes by comparing the property of two frames. Applicants traverse. Even if *Brown* teaches recognizing different modes, the modes are: a security threat and a non-security threat. There is no suggestion or motivation to modify the security surveillance system of *Brown* into an apparatus for monitoring a computer system while the computer system is

in an inactive mode and causing the computer system to exit the inactive mode in response to motion detected by a camera or any other device.

The Office Action states that it would be obvious to combine the teachings of *Ng*, *Stedman*, and *Brown* to provide a system capable of immediately identifying changes in an image represented by a video signal. Applicants traverse. *Ng*'s system identifies changes in an image represented by a video signal. However, there is no suggestion or motivation to modify the video surveillance system of *Ng* into an apparatus that monitors a computer system and **compares frames while the computer system is in an inactive state** and causes **the computer system to exit the inactive state in response to the weighted average brightness difference** of two frames.

Therefore, whether taken individually or in combination, *Stedman*, *Ng*, and *Brown* do not disclose, teach, or suggest comparing two frames while the computer system is in an inactive mode, and causing the computer system to exit the inactive state in response to the weighted average of brightness of the two frames differing by a predetermined amount. These features are expressly recited in claims 15 and 22. Therefore, the present invention as claimed in claims 15 and 22 is patentable over *Stedman*, *Ng*, and *Brown*.

Claims 16, 18, 19 and 21 depend from claim 15. Claims 23 and 24 depend from claim 22. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 16, 18, 19, 21, 23, and 24 are patentable over *Stedman*, *Ng* and *Brown* for at least the reasons set forth above.

Conclusion

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 15, 16, 18, 19 and 21-24 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
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Date: 11/27/02

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Examiner L. Nguyen
Art Unit 2612